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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/869,622

06/28/2001

Atsushi Fujii

KINOSHITAC-2

5759

7590

11/19/2003

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EXAMINER

KILKENNY, TODD J

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 11/19/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/869,622

Applicant(s)

FUJII ET AL.

Examiner

Todd J. Kilkenney

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5 . 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I in Paper No. 7 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 – 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The third paragraph of claim 1 suggests "subsequently, heating to foam... while compression-bonding the foamable raw sheet to the close-contact medium..." Is this intended to require the foamable sheet to be first compression bonded before foaming and thereafter compression bonded again (or continuously) when the sheet is subsequently heated to foam? If so, in what embodiment of the disclosure is compression bonding occurring while the foam sheet is being heated to a foaming temperature?

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1733

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holmstrom et al (US 3,220,901) in view of ^{Thoen et al} ~~Polyolefin~~.

Holmstrom et al disclose a method for producing a foamed sheet, comprising directing a foamable sponge ply (22) along with a face ply (20) and back ply (21) into the bight of a fabric band (15) (applicant's claimed "close-contact medium") and a pressure band (14). Referring to Figure 1, the three plies are heated by heating drum (10) to a temperature lower than a foam initiating temperature and pressed by pressing band (14) at which point the fabric band (applicant's "close-contact medium") is embedded into the back ply to support the laminate. The foamable sponge ply (22) embedded with said fabric band (15) is passed under radiant heaters (31 – 35) and around heated roll (11) to gradually raise the temperature of the sponge ply above a foam initiating temperature to form a foamed sponge sheet. Thereafter, the foamed laminate is cooled and stripped off the fabric band (15) at stripping roll (18). In light of the suggestions of embedding and stripping between the fabric band (15) and the laminate, one of ordinary skill in the art at the time of the invention would have readily appreciated said fabric band (15; applicant's claimed "close-contact medium") to be bonded to the laminate, wherein such bonding is derived by the heating drum (11) and pressure band (14) to read on applicant's claimed thermocompression bonding (Figure 1; Col. 2, lines 13 – 65; Col. 3, lines 48 – 62). It is noted, Holmstrom et al appreciate the feature of foaming while supporting the stock so as to protect against distortion and shrinkage (Col. 1, lines 49 – 56).

It is additionally noted that while the embodiment disclosed in relationship to the Figures suggests a laminate including back and face plies, Holmstrom et al also suggests that the process may be carried out with the elimination of the face ply, the back ply or both the face ply and back ply to manufacture an unsupported sponge product (e.g. a foamed sheet) (Col. 4, lines 7 – 17). With elimination of the back ply, Holmstrom et al teach bringing the sponge ply (22) into contact with the fabric band (15; applicant's close-contact medium) as claimed.

While Holmstrom et al appear to suggest the claimed process steps, Holmstrom et al teach the sponge ply to comprise polyvinyl chloride failing to suggest a polyolefin foamed sheet.

Thoen et al teach a PVC-free foamed flooring composite and suggest polyolefin as an improvement over PVC for foam resilient cushioning as means to eliminate the substantial environmental impact ordinarily associated with PVC flooring products. Thoen et al also disclose polyolefin is an advantageous alternative as it can be melt processed on ordinary PVC equipment (Col. 1, line 15 – Col. 2, line 37; Col. 3, lines 30 – 50).

It therefore would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Holmstrom et al by employing polyolefin as opposed to polyvinyl chloride in constructing the foamable ply in view of Holmstrom et al suggesting the use of other resinous plastics having similar properties to those of vinyl compounds would be within the scope of the invention and Thoen et al suggesting polyolefin polymers are advantageous alternatives to PVC in flooring products, including

Art Unit: 1733

floor foamed cushioning layers as polyolefin polymers eliminate the environmental impact ordinarily associated with PVC and are easily processable on ordinary PVC equipment.

As to claim 2, referring to Figure 1, Holmstrom et al depict an apparatus comprising heated rollers (10 and 11) and guide rollers (17 – 19) to which the endless fabric band (15) passes around. Said endless fabric band (15) is taken to read on applicant's endless belt. Said heating drum (10) is taken to read on applicant's first roller, which is heated to a temperature below the foam initiating temperature and said roll (11) is taken to read on applicant's claimed second roller, which is heated to foam the sponge layer.

As to claim 3, roll (11) is recognized as heating a first surface of the sponge laminate while the sponge laminate is in close contact with the fabric band (close-contact medium) and zone heater (37), which is disclosed as continuing the blowing step is recognized as heating a second surface of the sponge laminate after the opposite surface has been heated by roll (11).

As to claim 4, roll (11) and radiant heaters (36) as depicted in Figure 1 are recognized as simultaneously heating to foam both surfaces of the sponge ply (22), while the ply is in close contact with the fabric band (15).

As to claim 5, the sponge ply (22) is directed into the bight of the pressure band (14) and fabric band (15)/heated drum (10) by bottom roll (12), which is taken to read on applicant's claimed nip roller. Furthermore, bottom roll (12) is disclosed as having a

Art Unit: 1733

temperature of 320° F, which is below the 325° F disclosed temperature of the heat drum (11).


Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is (703) 305-6386 or if attempting to contact after December 18, 2003 (571) 272-1219. The examiner can normally be reached on Mon - Fri (9 - 5).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



TJK



JEFF H. AMTERGUT
PRIMARY EXAMINER
GROUP 1300